



Occlusion Principles in Implant-Supported Prosthesis

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ABSTRACT: Dental implants are frequently preferred options for replacing missing teeth. It is reported that the success rate is over 90%. Excessive occlusal loads cause bone loss or implant loss, even if the implants are well-osseointegrated. There is no shock absorbing periodontal membrane (PDL) around the implants. Their movements are almost negligible against occlusal forces. Natural teeth can move up to 56-108 μm vertically and 10-50 μm horizontally against occlusal forces. There is no rotational movement; the bending forces create the fulcrum effect on the bone. The resistance of cortical bone against lateral forces is low and causes bone loss around the implant. Periodontal mechanoreceptors are absent in implants. Changes in chewing forces are detected and adapted by mechanoreceptors sensitive to Golgi-Mazzoni type vibrations in the periosteum. Implants cannot perceive force changes like natural teeth. Therefore, they are more likely to be exposed to more force than natural teeth. Due to forces that exceed biological limits, the sign of occlusal trauma seen in natural teeth is not seen in implants. Occlusal forces that exceed biological boundaries lead to failure of the supra-implant structures (screw loosening, screw breakage, veneer fracture, implant fracture) or marginal bone loss. For the success of long-time implant prostheses, biomechanically controlled occlusion plan away from excessive occlusal forces is required. This presentation reveals the principles of occlusion that provide biomechanically optimum load distribution in different implant prostheses.



Biography : Recep Kara received his undergraduate education from Istanbul University. He has completed his PhD from Istanbul Aydin University. Besides working in his private clinic, he also works as a lecturer. He has over 20 years of clinical experience. He has published several papers in reputed journals.

Publication: 1. Aflatoxin M-1 in buffalo and cow milk in Afyonkarahisar, Turkey
2. Detection of *Listeria* species in fresh fish and fish market environment by IMS technique in Turkey
3. Enterotoxin production by *Staphylococcus aureus* (A, B, C, D) during the ripening of sucuk
4. Occurrence of *Escherichia coli* O157 : H7/O157, *Listeria monocytogenes* and *Salmonella* spp.
5. A survey of the occurrence and properties of methicillin-resistant *Staphylococcus aureus* and methicillin-resistant *Staphylococcus*

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